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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,078	03/10/2004	Yuan-Chin Liu	TAIW 216	4258

7590 01/18/2007  
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EXAMINER

MORRISON, THOMAS A.

ART UNIT PAPER NUMBER

3653

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/796,078

Applicant(s)

LIU ET AL.

Examiner

Thomas A. Morrison

Art Unit

3653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 21-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 recites "the driven gear" in lines 13-14. It is unclear if "the driven gear" in lines 13-14 refers back to the previously recited "a first driven gear" or the previously recited "a second driven gear" in claim 21.

Regarding claim 29, it is unclear what is meant by the recited "vertical **type** feed tray". (emphasis added).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 21-23 and 26-29, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,547,181 (Underwood).

Regarding claim 21, Figs. 1-8 show a paper pickup mechanism mounted in a feed tray (near 52), comprising:

- a pickup shaft (not numbered, but located near 56);
- a gear set, including:
  - a transmission gear (68) provided at one end of the gear set, a center of the transmission gear (68) being pivotally connected to the pickup shaft (not numbered);
  - a driving gear (lowermost gear 66 in Fig. 4), transmitting power from a power source (90),
  - a first driven gear (uppermost gear 66 in Fig. 4) that is engaged with the driving gear (lowermost gear 66 in Fig. 4);
  - a second driven gear (64) that is engaged with the first driven gear (uppermost gear 66 in Fig. 4) and engaged with the transmission gear (68)(i.e., the second driven gear 64 is engaged with the transmission gear 68 via element 62);
  - a first connecting rod (58) that connects the driving gear (lowermost gear 66 in Fig. 4) to the first driven gear (uppermost gear 66 in Fig. 4) and to the second driven gear (64); and
  - a second connecting rod (62) that connects the transmission gear (68) to the driven gear (64);
  - a pickup roller (56), mounted in the feed tray (near 52) and being pivotally connected to the pickup shaft (not numbered, but located near 56);
  - a set of interconnected swing arms (60 and 74)(i.e. swing arm 60 is interconnected to swing arm 74 via elements 62, 68 and 70), one of the swing arms (60) being connected to the pickup roller (56), and another of the swing arms (74) being connected to a suspended arm (i.e., axle of gear 72 or axle of gear 70) in the feed tray;

a twist restricting gear (70), disposed on a side of the feed tray, and engaging with the transmission gear (68); and

means (including 80) for allowing the twist restricting gear to rotate only when a twist force provided by the gear set applied to the twist restricting gear (70) is greater than a predetermined force.

Regarding claim 22, Figs. 1-8 show that the means (including 80) for allowing comprises a twist limiter (80) mounted adjacent the transmission gear (68) for providing the predetermined force.

Regarding claim 23, column 3, line 43 discloses that the twist limiter (80) is a twist spring.

Regarding claim 26, Figs. 1-8 show that the twist limiter (80) and the twist restricting gear (70) are mounted on an outer side of the feed tray.

Regarding claim 27, Figs. 1-8 show that the first connecting rod (58) has an approximately L shape (i.e., small letter "l" shape).

Regarding claim 28, Figs. 1-8 show that the set of swing arms (60 and 74) includes a first arm (74) and a second arm (60) which are interconnected to each other, one end of the first arm (74) being connected to the suspended arm (i.e., axle of gear 72 or axle of gear 70), and one end of the second arm (60) being connected to the pickup roller (56).

Regarding claim 29, as best understood, Figs. 4 and 8 show that the feed tray is a vertical type feed tray.

***Allowable Subject Matter***

3. Claims 24-25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Morrison whose telephone number is (571) 272-7221. The examiner can normally be reached on M-F, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey can be reached on (571) 272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

01/11/2007



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